

of bleeding complications in patients receiving clopidogrel at the time of cardiac device surgery.

Methods: Between July 2004 and July 2010, 101 consecutive patients underwent cardiac device surgery (pacemaker or implantable cardioverter-defibrillator implantation, generator replacement) under clopidogrel therapy in our institution. Controls were 1:1 matched on age, sex, device, type of procedure, number of leads implanted, and venous approach (cephalic or subclavian). A significant bleeding complication was defined as pocket hematoma requiring surgical evacuation or prolonged hospitalization, hemothorax, pericardial effusion or tamponade.

Results: Bleeding complications occurred more frequently in patients receiving clopidogrel at the time of device procedure: 11.9% vs. 4.0% ($p=0.037$; OR 3.27 (1.02-10.5)). Bleeding complications were noted in 12 patients (11.9%) receiving clopidogrel, including 10 pocket haematomas, 2 patients with pericardial effusion and one patient with hemothorax. Four controls (4.0%) had bleeding complications (3 pocket haematomas and one pericardial effusion). The single factor associated with increased bleeding complications in patients receiving clopidogrel was subclavian puncture ($p=0.008$). In the entire cohort ($n=202$), multivariate analysis identified subclavian puncture as the single independent predictor of bleeding complications ($p=0.02$; OR 3.75 (1.23-11.4)), whereas a non-significant trend was observed for clopidogrel treatment ($p=0.08$; OR 3.0 (0.87-10.3)).

Conclusion: Clopidogrel treatment at the time of heart rhythm device procedures is associated with a 3-fold increased risk of significant bleeding complications. Subclavian puncture strongly increases hemorrhagic complications in this setting, so as a cephalic cut-down first-line approach appears safer in these patients.

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Prevalence of heart disease in patients with paroxysmal supraventricular tachycardia and prognosis

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Paroxysmal supraventricular tachycardia is considered benign because it occurs in subjects with healthy heart. When SVT occurs in patients (pts) with heart disease (HD), the prognosis is unknown. The purpose of the study was to report the prognosis of SVT occurring in pts with HD.

Methods: 1269 pts, aged from 6 to 93 years (mean 50 ± 19) with a normal ECG in sinus rhythm, without anterograde conduction through an accessory pathway (AP) were recruited for SVT's. Clinical history, echocardiographic and electrophysiological data were collected. Pts were followed from 3 months to 20 years (mean 3.5 ± 4).

Results: SVT occurred in 133 pts with HD (10%), ischemic HD (59), valvular HD (21), congenital HD (5), dilated cardiomyopathy (25), various HD (23). Their mean age was 62 ± 15 years. Remaining 1136 pts, mean age 48 ± 19 ($p<0.0000$) had no apparent HD. SVT ablation was performed in 788 pts, 72 with HD (54%), 712 without HD (64%) (NS 0.055). SVT mechanism was similar, AV reentrant tachycardia (AVRT) through concealed AP 21% in pts with HD, 18.5% in pts without HD (NS), atypical or typical AV node RT in remaining pts. During follow-up, 19 of 133 pts with HD (14%), 56 ± 14.5 years old, died from cardiovascular (CV) death (sudden death 9, heart failure-related death 9, death after ablation in 1 old woman with aortic stenosis by collapsus). Only 8 pts without HD, mean age 52 ± 22 , died from CV death (0.7%) ($p<0.000001$) (sudden death 2, heart failure 2, SVT ablation-related death 2, rhythmic surgery-related death 1). Three pts with SVT and HD are in stage IV of heart failure; 13 pts with HD are in permanent atrial fibrillation (AF) (10%); only 52 pts without HD are in AF (4.5%) ($p<0.01$); 3 of them died from CV death.

Conclusions: We confirm the low risk of SVT-related death in pts without HD. At contrary, pts with HD and SVT are at high risk of cardiovascular events despite ablation of SVT. Sudden deaths and heart failure-related deaths are frequent. They are also at risk of AF.

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Evolution of symptoms among patients with a preexcitation syndrome

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Accessory pathway (AP) ablations have exploded in recent years and natural follow-up of preexcitation syndrome (PS) became difficult. The purpose of the study was to report the natural changes of clinical and electrophysiological data in patients with a PS.

Methods: Electrophysiological study (EPS) was performed in 74 patients, mean age 31 ± 16 with a PS and was repeated 1 to 21 years later (mean 9 years ± 6). EPS 1 was indicated for syncope ($n=8$), atrioventricular reentrant tachycardia (AVRT) ($n=39$), atrial fibrillation (AF) ($n=3$), spontaneous adverse presentation ($n=4$) or for asymptomatic PS ($n=20$). The protocol was similar at both EPS.

Results: At study 2, clinical data remained unchanged in 39 patients (53%); 12 initially asymptomatic patients became symptomatic (60%); 11 initially symptomatic patients became asymptomatic (20%). At EPS 2 the highest rate conducted by AP was lower in control state and after isoproterenol. AP has lost anterograde conduction in 22 patients, but 10 had still AVRT. Among 28 patients with initially rapid conduction through AP, 5 became asymptomatic with a benign form; 23 have still a rapid conduction at EPS 2; 3 initially asymptomatic patients developed rapid AF. The frequency of AVRT induction was similar at EPS 1 and 2. The frequency of AF induction tended to decrease (NS).

Conclusions: A benign preexcitation syndrome without inducible AVRT or AF remains benign. Rate conducted through AP decreases during the life, but AVRT remains inducible. Patients with AVRT and AP with a long refractory period become asymptomatic in 15% of cases. There is a discrepancy between clinical presentation and data of EPS.

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Prevalence and causes of reappearance of symptoms or of a preexcitation syndrome after ablation of accessory pathway

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Accessory pathway (AP) ablation is now a current treatment of symptomatic patients (pts) with a Wolff-Parkinson-White (WPW) syndrome or pts with a potentially malignant form at electrophysiological study. The success is considered as high. The purpose of the study was to look for the prevalence of the reappearance of symptoms or preexcitation syndrome after ablation.

Methods: Successful AP ablation was performed in 327 pts aged from 10 to 77 years, mean age 35 ± 16 , with a WPW. Reappearance of symptoms or of a preexcitation syndrome on ECG occurred in 50 patients (15%) from several hours to several years (group I). Clinical and electrophysiological data were studied in group I and remaining pts (group II).

Results: Group I was younger than group II (31 ± 16 years vs 36 ± 17 , <0.05). There were no differences concerning the gender (male 56% vs 60%) and the reason of ablation (spontaneous malignant form 20% vs 27%; spontaneous AV reentrant tachycardia (AVRT) 60% vs 58%, asymptomatic with electrophysiological signs of malignancy 20% vs 15%). There is a tendency (0.08) for a more frequent septal AP location in group I (54%) than in group II (41%). Other locations did not differ. During follow up, among initially asymptomatic group I pts, 2 became symptomatic and had inducible AVRT at the control. Group I pts with spontaneous AVRT presented recurrences of AVRT, but 1. Among group I pts with spontaneously malignant form, 3 pts lost the signs of malignancy at 2nd EPS; one pt who presented only with rapid AF had an AP with long refractory period but developed incessant AVRT's; 6 pts had still signs of malignancy.

Conclusions: The reappearance of symptoms or a preexcitation syndrome on ECG after AP ablation is not rare (15%) and is generally associated with the reappearance of all initial electrophysiological properties of AP. Pts without AVRT before ablation may become symptomatic and develop AVRT after ablation. A young age and a septal AP location were factors of recurrence.